



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

68

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,749	12/21/2001	Rudiger Hauschild	71980/56667	8823
21874	7590	10/08/2004		EXAMINER
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205				ROSS, DANA
			ART UNIT	PAPER NUMBER
			3722	

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/019,749	HAUSCHILD ET AL.
	Examiner	Art Unit
	Dana Ross	3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 2 August 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 11-18,20-28 and 30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 11-18,20-28 and 30 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 21 December 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The objection to the disclosure for containing the new matter of “non-cutting” blade edge, is withdrawn due to Applicant’s amendment filed 02 August 2004 as having support in the Abstract.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 11-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 11 – 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “cutter blade” in claims 11 - 30 is used by the claim to mean a tool without cutting edges, while the accepted meaning clearly involves a tool with cutting edges. The definition of a “cutter” is

Art Unit: 3722

“a tool or machine for *cutting*.” (Emphasis by Examiner). The term is indefinite because the specification does not clearly redefine the term.

Applicant may have redefined the “blade edge” to be non-cutting edge, but Applicant has not redefined “cutter” to the extent that one reasonably skilled in the art would be on notice that this term has been completely redefined.

The Examiner has maintained these rejections since it is still unclear to what benefit or purpose an invention would provide a “cutter” without “cutting edges.” Certainly a “cutter blade,” to any ordinary artisan, is immediately assumed to be a “cutting device.” The removal of cutting edges on a cutter clouds the spirit of the invention and renders the claims unclear.

Definition: The New Merriam Webster Dictionary, Merriam-Webster, ©1989.

5. Claims 11 and 21 explicitly disclose a milling-type tool that includes a blade that is rotated and driven in a direction transverse to the axis of rotation that is known to perform a cutting action. Applicant’s assertion that the blade does not include cutting edges renders the claims indefinite and unclear since it is unclear how a “cutting blade” that clearly operates in a way known in the art somehow fails to possess cutting edges. Alone, the use of the element “cutting blade” with the limitation “without cutting edges” is unclear. The Examiner notes that the intended use of the tool (i.e. for machining “chipless” materials) is interpreted as intended use and is not a physical limitation of the tool. Furthermore, the Examiner has determined that this intended use does produce “chips” (in the broadest reasonable sense of the term) since the tool is used on a workpiece and produces scrap material.

The claims will be examined as best understood.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11 – 15, 18, 21 – 25 and 28 are rejected, as best understood, as necessitated by amendment, under 35 U.S.C. 103(a) as being unpatentable over Williams.

Regarding claims 11, 12 and 18, Williams discloses a shank-end milling-type tool comprising a shank portion (1) having a longitudinal axis, a first end that can be detachably connected to a drive device and second end with a groove-shaped recess (2) extending in the longitudinal direction, a cutter blade (4, 4a, 4b, 19 and 27) in the groove and fixedly attached to the shank having a leading flat face in the direction of use wherein the blade made of steel and is provided with a wear resistant blade edge on the leading face (Col. 2, lines 43 – 53).

Williams discloses in figures 2, 2a, 3b, 4, 5, 6, 8 and 9 that the cutter blade is in the form of a flat bar.

Regarding claims 13 – 15, Williams discloses in figures 2a and 2b that the leading and trailing edges are rounded and cut-corner designs.

Regarding claims 21 – 25 and 28, Williams inherently teaches the method steps as set forth in the above rejections.

However, Williams fails to explicitly state the thickness of the blades used in the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made

Art Unit: 3722

to modify the thickness of the inserts to any size since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, Applicant has provided no basis for why this particularly wide range of insert thickness (0.1 mm to 5.00 mm) is crucial to the workability of the device.

8. Claims 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of Schweikert et al.

Williams discloses all of the elements as set forth in the above rejections, however, Williams fails to disclose the cutter blade comprises a curved surface having a convex face, parallel to the longitudinal axis, pointing toward a direction of rotation during use.

Regarding claim 16, Schweikert et al. discloses a milling tool similar to the instant invention as well as Williams, comprising a shank-end tool with a cutter blade comprising a curved surface having a convex face, parallel to the longitudinal axis, pointing toward a direction of rotation during use (see figure 6).

Regarding claim 26, Schweikert et al. inherently discloses the method steps as set forth in the above rejection since Applicant has set forth no further limiting method steps or article limitations.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the blade of Williams to include the curved surface of Schweikert et al. since Schweikert et al. teaches the use of this surface in order to overcome vibration and high wear problems (Col. 1, lines 29 – 31 and 36 – 38).

Art Unit: 3722

9. Claims 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of Ogawa.

Williams discloses all of the elements as set forth in the above rejections, however, Williams fails to disclose the cutter blade comprises surfaces that operate in a “fan-like” action.

Regarding claim 17, Ogawa discloses a cutting tool similar to the instant invention wherein the blade includes a shovel-like arrangement with blades that are sloped with an angle relative to the longitudinal axis to produce a fan-like action.

Regarding claim 27, Ogawa inherently discloses the method steps as set forth in the above rejection since Applicant has set forth no further limiting method steps or article limitations.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the blade of Williams to include the shovel-like blade of Ogawa since Ogawa discloses this arrangement on the blade in order to reduce cutting friction and prevent the blade edge from being burned (Col. 1, lines 34 – 67).

10. Claims 20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of Freitag.

Williams discloses all of the elements as set forth in the above rejections, however, Williams fails to disclose the shank comprises a hollow cylindrical body at least at the second end.

Freitag discloses a cutter similar to the instant invention for cutting through a Styrofoam workpiece comprising a hollow cylindrical shank (40). See figure 3.

Regarding claim 30, Freitag inherently discloses the method steps as set forth in the above rejection since Applicant has set forth no further limiting method steps or article limitations.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shank of Williams to include the hollow shank of Freitag since Freitag inherently teaches this void in order to experience a weight reduction of the device.

Response to Arguments

11. Applicant's arguments filed 2 August 2004 have been fully considered and were persuasive regarding the "new matter" issues but they are not persuasive as to the claim rejections.

Applicant provided a very detailed, and much appreciated, explanation of the current invention.

In response to Applicant's comments regarding the 35 USC 112 2nd Paragraph rejections, Examiner notes that Applicant claims a cutting blade "without cutting edges", which is supported by the disclosure. Applicant's cutting blade 8 has leading edges 12, which are in fact, the cutting blade edges. Therefore Applicant's invention does, in fact, have "cutting edges". As is discussed in the above 35 USC 112 2nd Paragraph rejection, the terminology of the cutting blade without cutting edges is at issue since applicant's invention is directed towards a "cutting blade" that performs the intended use function of "no" cutting. It is the intended use of the edges of the blade that appear to be at issue. Therefore, there is a terminology issues with what is being defined as a cutting blade with edges and the cutting edges, or lack of cutting edges.

Applicant states “the cutting tool does not exhibit a cutting edge when the edge has an angle of 90°”. Examiner disagrees. Cutting edges are well known in the art to be of varying degrees, including 90°.

Applicant discusses several prior art references, however, those inventions are not at issue here. However, Examiner will address one comment of Applicant regarding US 4205799. Applicant states 4205799 teaches, “the cutter blades 44, as seen in Fig. 6 are **without edges**”. Examiner notes that throughout the 4205799 references, the inventor refers to a “cutting edge” of the cutter blade (see paragraph 3, line 27 for example), and furthermore, as is seen in figure 6, there are edges. Therefore it is not clear what point Applicant is trying to convey.

Applicant asserts, “it is accepted that a cutter blade is not required to have a ‘cutting edge’”. The definition of a blade is “the cutting part of an implement”. Therefore there is the inherent feature of cutting with a “cutting blade”, whether the intended use of the cutting blade is to perform cutting or not. Though it is possible to have cutting with shapes that do not have edges, Applicant’s invention has edges 12.

Though Applicant’s intended use of the “cutting blade” is for there to be no “cutting” with the cutting blade edges, the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding Applicant’s assertions to the claim rejections over Williams, Applicant asserts that since Williams has “cutting edges 5”, it is not applicable because the cutting blade of Applicant does not have “cutting edges”. Examiner disagrees and holds that it is inherent in a

Art Unit: 3722

cutting blade (an implement for cutting) with the structure as claimed by Applicant, to have a cutting edge, whether it is used for cutting or not.

Applicant' remaining arguments are directed towards the cutting edges of the cited prior art, and the claim by Applicant to have a cutting blade with no cutting edges. Applicant is referred to the above 35 USC 112 2nd Paragraph and 35 USC 103 rejections and is reminded that the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is 703-305-7764. The examiner can normally be reached on Mon-Thurs 6:00am to 4:30pm.

Art Unit: 3722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 703-308-2159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dmr


A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700